

# The Integration of Urban and Periurban Agriculture into the planning policy of Havana: Planning for Urban Sustainability?

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## INTRODUCTION

This paper uses the development of Urban and Peri-Urban Agriculture (UPA) taking place nowadays in Cuba as a general framework. The country Island has developed an innovative and comprehensive Model supporting Food production within the boundaries of its cities which has influenced the spatial configuration of many territories. The Planning institution has reacted adopting specific policies within its instruments. Cuba, the largest island of the Antilles and the only remaining Western Socialist society, had recently experienced two extreme situations. Firstly, the '90s observed an intense economical crisis produced after the collapse of the Socialist block. Secondly, it suffered the severe strengthening of the U.S.A blockade. The crisis generated a group of innovative responses and Measures known as *Período Especial* (special period) among them the first individual, spontaneous and later government-led support to UPA. The last years have seen the recovery of its economy along with the maintenance of its main social achievements. These improvements came accompanied by market-oriented components. After the partial overcoming of the crisis the main causes that originated the appearance of UPA have disappeared. This might represent a threat to counter.

The document focuses on the characteristics of the integration of UPA into the planning policy of Havana. It argues to what extent the planning policy represents an element countering the above depicted threat and supporting its existence. It identifies constraints and potential areas for further integration as part of a sustainable vision of the city. It offers an overview of the causes of its origin, antecedents of the planning response towards UPA emphasising on the peculiarities of the Havana case study. It finally argues about which are the impacts and most important lessons to be learnt from this experience and what the factors affecting its replication possibilities are.

## THE CHALLENGE

The collapse of the Eastern Europe block in the early '90s, with which Cuba conducted over 80% of its trade resulted in massive economic dislocation and severe social impacts. In the same period Cuba has suffered the strengthening of the USA economic, financial and politic 40 years lasting sanctions – the blockade – Resulting from this combination one of the most severely affected areas has been food supply: It is estimated that a 67% reduction of food availability was observed in 1994.

Generating effective mechanisms to meet people's food needs and to fulfil the government's commitment on this social issue became a challenge. What strategy would serve to meet the food demands of a predominantly urban population heavily dependent on the depressed countryside productions taking into consideration the scale and coverage of the crisis?

As part of the reforms of the so called "*Periodo especial*" a national alternative agricultural model has been developed since 1990. One important aspect of this model is the replacement of high levels of imported agricultural inputs with alternative produces and other approaches. Its ultimate goal for rural agriculture is to develop less mechanised, more labour intensive operations which involve local populations in low external input sustainable food production enterprises (Harris 2002). The present experience on Urban Food Production appeared and evolved towards an organised and co-ordinated program amid this process. Within this alternative model UPA was quickly identified as a viable large-scale response. It should be seen as a component of a wider strategic process rather than as an isolated one. As a result, gardens and orchards started to become part of the urban landscape and the life of the urban dwellers. In the period 1990-1994, it was estimated that more than 25,000 persons were linked to about 1800 of the by then so-called popular orchards.

## I. — URBAN AND PERIURBAN AGRICULTURE IN CUBA

The National program – presently co-ordinated by the National Group for Urban Agriculture which is made up by representatives of scientific institutions and other stakeholders – conducts promotion work and the implementation of 26 so-called subprograms. Each subprogram is dedicated to one specific type of production or aspect of the industry. For example, there is a Flowers subprogram, a Vegetables production subprogram, an herbs and spices subprogram, among other. The National group evaluates the performance of each territory according to the implementation of the different subprograms and its achievements. The result of this evaluation is the selection of the most outstanding municipalities, and the identification of best practices cases. Only two out of the 169 municipalities have not officially developed any kind of Urban Agriculture within this program.

Different forms of production corresponding to the types of agricultural techniques used are developed and other important components are the production supporter entities. Producers are grouped in different forms of association. Main forms of production are the Popular Organic Orchards (so called organopónicos) and High efficiency organic orchard (Organopónicos de Alto rendimiento, OAR). State Owned Self-production areas (Autoconsumos Estatales), Popular orchards divided into Parcels and Intensive Orchards (Huertos populares Parcelas y Huertos intensivos), and Covered houses (Casas de cultivo). Production supporter entities are Organic Material production Centres (Centros de producción de materia orgánica), Agricultural Clinics and shops (Consultorios Agrícolas, presently Tiendas Consultorio Agropecuario), Nursery Houses (casas de posturas). Farmers are associated in structures similar to those of the rural agriculture in different types of co-operatives (UBPC, CCS, and CPA) and there are Farmers Clubs compound by urban dwellers.

## II. 2 — THE INTEGRATION OF HAVANA'S URBAN AGRICULTURE INTO THE PLANNING POLICY: ANTECEDENTS AND CURRENT DEVELOPMENT

The Capital City Havana covers an area of 727 km<sup>2</sup>. 0.67 % of the total area of Cuba. Its population growth is 1.8% per year and has about 2.2 million inhabitants, which make up to 20 % of the Cuban population and 27% of its urban population. The average population density is 3 014 persons/km<sup>2</sup>. In spite of the decentralisation policy that took place during the previous 40 years in favor of the inner provinces, Havana still concentrated 34% of the National industrial production and major services in 2000.

The integration of UPA into the planning policy of Havana has had an alternate presence always as a response to extraordinary situations: In the '60s within the radical transformations of the

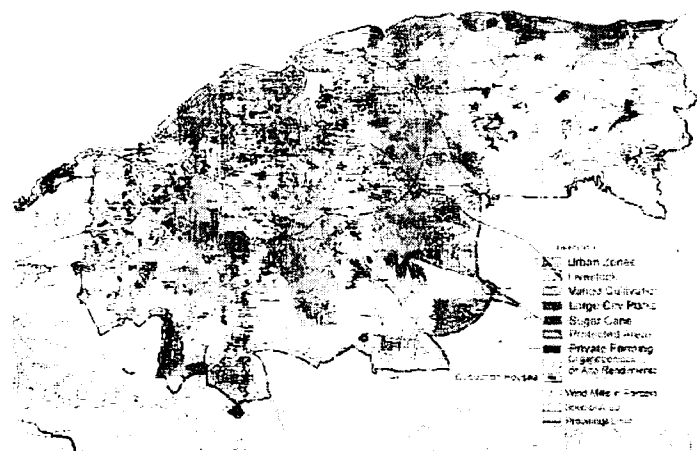


Fig. 1. Current agriculture taking place in Havana (2000). In orange the developed areas. Periurban Agriculture is majoritarian. Source: Physical Planning Office Havana

Cuban society. Havana's Green Belt (HGB) – El cordón de La Habana – was proposed at the 1964 Master Plan. It was envisaged as a program contributing to overcome the food provisions dependence of the Capital City from the inner territories. Later in the nineties in front of major economic and financial shortcomings, UPA appeared again amid a group of other innovative measures within the "Período Especial".

HGB was to provide productive surface to empower Havana's self-feeding capacity and an important amount of recreational areas. It was compound by a Fruit trees ring-belt in the lands closest to Havana, followed by a milk-producer one providing additionally Havana with environmental commodities, and recreational facilities. It is considered a distinguished antecedent of the present experience of Urban Agriculture both in the production and its integration into the Planning Policy. It showed for the first time a scheme for self production in a large scale for Havana, the potentialities for its implementation, the extension of its objectives to other areas such as recreation through the implementation of multifunctional land uses schemes. It considered however only peripheral activities since intraurban agriculture was not conceived. The present experience assumes many of the precepts of its predecessor taken now to a higher dimension where the organic character is relevant. Many of the areas used for Agriculture at that time are part of those currently registered within the UPA program.

## THE EXPERIENCE OF THE '90S

After 1991, several open spaces within the urban frame but also of available areas within productive, services, educational, recreational, and health care facilities were used to produce food. Most of them were small plots given in usufruct for a temporal but undefined time, to be exploited by citizens.

Additionally, support for citizens on food related issues has prevailed as a prioritised issue in the Cuban political Agenda since the early 60's and after the crisis urban agriculture was early identified as a means to ensure food availability for a large amount of households and recently as an important provider of jobs. There is also a growing awareness of environmental damage caused by intensive conventional techniques. These statements show that the government is eager to promote urban and organic food production for both socio-economic and environmental reasons. The implementation of the UPA program also targets price reduction since fresh produce offered at the farm gate is cheaper than that brought from the countryside into the city's free markets. The Ministry of Agriculture Urban Agriculture Department has about 67 extension officers to provide extension and training services to the organic farming sector.

#### URBAN AND PERIURBAN AGRICULTURE IN THE PLANNING INSTRUMENTS

Definitions in place for UPA are in a way normative since they provide a vision of how urban agriculture should be, i.e. an aspiration or result too vague as to give a clear understanding of its urban character and its implications. Issues such as differentiation of intraurban agriculture from periurban agriculture have been scarcely if not at all discussed in our context. A similar phenomenon is appreciated in the planning policy. The territorial ordering scheme (TOS) 2000 defines Urban Agriculture as "taking place in an urban context, subordinately integrated into this context which should not lose its essential requirements (i.e. its urban character\*) and looking for sustainability. This Agriculture will have within this context a group of restrictions for each of its modalities" (DPPFA 2000) The document provides a clear zonification that limits which of the so-called subprograms proposed by the NGUA project can be carried out in each of the zones established in the territorial model. (See fig 2)

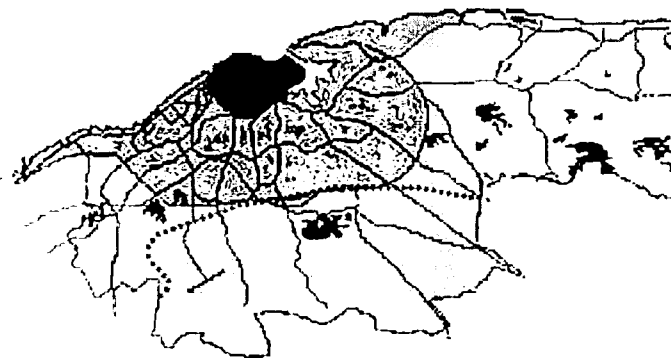


Fig. 2. The territorial model defines three zones: Central, Intermediate and Peripheral (From dark to light) Vento subterranean watershed marked by dots. Source: Physical Planning Office Havana

In such a way, no urban agriculture activity is allowed in the Central area but the planting of trees in parterres and parks, arguing its compact area is unable to support these activities. The intermediate zone is allowed to keep activities such as horticulture, flowers and ornamental planting, herbs planting, poultry, and other minor activities. A temporal character is assigned to the activity. The peripheral zone is given more opportunities. It is recognised that it represents 56% of the total area of the province and that its major current use is agriculture. Therefore the Scheme subdivides it into four zones: west, south, southeast and east. All the activities or subprograms, including cattle, are allowed in this vast area. Special attention is set to the landscape values of specific areas. Over the conflictive area of the Vento subterranean watershed is allowed to crop with organic techniques and the development of city parks. Cattle activities and sugarcane plantations are to be removed.

For the first time ever, the TOS and Plan for Havana recognise Urban Agriculture as a Permanent Urban Function. It is a tacit recognition to the role UPA have played in the scenario-shaping process of the contemporary Havana. It is as well the result of the attention that all the elements of the decision-making-chain pay to the phenomena. However, in general terms the approach is reactive. It limits the activity instead of promoting it. The proposed zonification is rather rigid, especially when referring to the most consolidated (Central) area where all forms of Urban Agriculture other than tree ornamental planting are prohibited. The strict limitation suggested for the central area is in correspondence with the vagueness of the adopted definition, which fails to recognise the variety of activities involving UPA and the opportunities (and needs) that even the most consolidated urban structure generate. It seems like the institution of planning has recognised UPA as a relevant component of the territorial structure of the city but the approaches fell short by recognising only one part of its potentialities. There is a need for the acknowledgement of UPA, as a contributor in the achievement of its major planning goals, taking advantage for instance, of the opportunities that in the consolidated zone, provide unoccupied plots, the use of walls and roofs, the occupation of parks and squares and many other potentialities. This does not contradict the need of regulation and control for UPA due to its risks.

We might associate the adoption of such an approach to the lack of training of the planning staff to deal with urban agricultural issues, to an insufficient participation of the Agricultural representatives within the Institutional participatory framework that the planning process allows, the prevalence of a "rural approach" (Cruz 2001), and/or to the absence or insufficient participation on the process of third parties with a more comprehensive view on the issue.<sup>1</sup> Actually the recent changes on the municipal structure towards a more active role in the planning activity, together with the relative youth of the UPA phenomena, has found the institution without enough

tools to address it. The powering of the institution at this level with such specific and flexible tools would be an essential means to ensure the enforcement of the policies and by-laws, providing incentives, and monitoring the activity from a closer point of view and catching up with the local work of the agricultural representatives.

A key aspect to understand UPA as an Urban Activity and to address in a superior stage its integration is its classification as a *permanent urban function* which is not synonymous of *permanent land use*. UPA is opportunistic. Because of its benefits the important issue is to keep it by any means. Therefore its integration within the planning policy must be based on flexibility and specificity. Flexibility refers to the ability of providing a range of alternative solutions able to allow and encourage the appearance and later survival of UPA whenever the conditions make it possible. Specificity refers to the need to cope with the very particular character of UPA that makes it totally different of rural agriculture.

The emphasis of the development of UPA has been set in only a few of the advantages of UPA, namely in the food production opportunities it generates, the amount of jobs it has generated and its nutritional potential advantages. Much work has to be done to educate planners and the public on the multilateral benefits of UPA. The same applies to politicians and decision-makers given the leadership the government has reached in its conduction. In parallel, planners are to be further educated on the alternatives that Urban Agriculture offers.

## CONCLUSIONS

UPA has become a key element for the spatial configuration of the land use pattern of Havana. Its conscious integration in the planning policy can potentially become a promoter of urban sustainability for the City if the environmental dimension is addressed within the innovative strategy it represents, which is currently directed counter two major contemporary social problems, namely food security provision and employment. These two are part of any social agenda all over the world, especially in the developing countries. UPA potentialities in these areas have been fully exploited with relevant outcomes. The attention of the decision makers and planners has focused the positive socio-economic impact derived from the implementation of the program. Additionally, the spatial enlargement of the activity has likely generated indirect positive impacts on the urban environment that are still to be quantified. It has generated a set of small and large-scale economic activities accompanied by an increasing supporting research work in different areas.

Two main elements let us state that the planning policy framework of Havana is a strong element countering the above presented threat. Firstly, its committed involvement in the process that ensured the success of UPA; secondly, the recognition that the last TOS offers to UPA as a Permanent Urban Function. It is an evidence of the will of the provincial authorities to support the project. Contrastingly the 1997 Strategy for Havana's Socio-Economic Development, does not mention UPA. Just four years later, the TOS and the Plan for the City recognise with full rights UPA as a permanent Urban Function. This is a tacit recognition to the importance conceded



Fig. 3. Urban and Periurban Agriculture are considered Permanent landuses(greens). The land uses map defines changes in the agricultural use mainly associated to the reduction of cattle areas over the Vento subterranean watershed. Source: Physical Planning Office Havana

to this activity for the definition of the urban land uses pattern and demonstrates that a high level of integration of UPA in the planning policy has been achieved. The change seems to be more the result of the active involvement of the planning institution, the understanding of the increase rate observed and its likely further enlargement than the real acknowledgement of all its potential benefits and intrinsic potentialities for contributing to fulfill its major institutional goals.

The point is that this performance in the social and economic dimensions seems like it has displaced the attention on environmental and aesthetic issues to a secondary position. The claim on this matter is that the further integration of UPA in the planning policy of Havana should represent a factor of balance for this situation, contributing to give greater profile to the environmental dimension. This would mean bringing these policies nearer to the sustainable paradigm targets and the insertion of the activity as an organic component of the urban landscape. To this purpose the current reactive should turn into proactive attitudes towards UPA. Powering the municipal planning level with flexible and specific tools to address UPA and the adoption of wider participatory approaches including the farmers and other stakeholders are key elements of the necessary change. The present evaluation and indicator systems in place for UPA in Havana do not meet alone the demands of the planning activity since it focuses mainly on yields and production volumes. A new set of indicators should be developed. New tools and training on UPA's benefits and risks should be provided to the planners. The favourable current stage of this process favors achieving a necessary two-direction exchange in one way, making of the planning policy a supporting element for the development of the activity. On the other, allowing the planning institution to take advantage of the potentialities of UPA to attain its objectives.

The National Institute for Physical Planning has generated recently a new Methodology for Municipal Planning which was awarded an important prize by the Sciences Academy of Cuba. A chapter addressing production is under development. This is a relevant issue regarding many of the ideas here exposed. The integration within this methodology of tools and/or guidelines to address UPA should be a powerful tool ensuring its implementation. In parallel, there is a debate on the convenience of including the analysis of UPA as a component of the Green Areas System of the City. The Havana Planning Office presently develops a scheme with this approach. Both aspects will provide more consistency to the analyses on UPA influencing for instance in the inclusion of UPA in new urban development schemes as well as its inclusion in multifunctional land uses schemes.

In terms of its socio-economic situation and political system, Cuba is unique. Undoubtedly, part of the success in adopting an alternative agricultural model can be associated to the central government influence on markets, and other aspects of the society. In spite of its uniqueness there are important lessons to be learned from the Cuban experience. A mixture of innovation and determination are making today the Cuban experience a success story. Cuba adopted a largely organic approach to agriculture in which UPA occupies a relevant role. Emphasis here has been observed initially on food production and later on jobs generation and nutrition quality and education issues in the detriment of environmental and aesthetic considerations. The planning institution has played an active role in this development, facilitating the evolution of an activity which probably represents the most dynamic component of the land uses pattern and the most evident sustainability promoter.

However there is a big deal of speculation on whether the likely progressive recovery of the Cuban economy might implicate the revival of the former large-scale, agrochemicals -based model in the Cuban agricultural System. The insertion of the country into the globalized market relationship system, for instance a change in the relations with the USA, represents similar risks. In the case of Havana the likely appearance of a strong and competitive market for the urban soils and an increment on the flows of investments are part of this debate regarding the UPA experience. But so far the experience on UPA has continued its development and all signals indicate it would remain even if the alternative model that gave it birth collapses.

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## NOTES

- <sup>1</sup>Other preparatory documents consulted at the institution of planning contained more detailed information on the issue UPA. There are shown components of a more flexible approach by recognising the possibility of using temporally the territories under the classification of non urbanised areas for agricultural production.